Ethiopian Primary health care clinical guideline: what we have learned from its implementation on 400 Health centers?

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1. Background

Ethiopia is the second most populous country in Africa, with a population of 105 million people—more than four out of ten citizens (42%) are younger than 15 years of age(1).

In the past two decades, Ethiopia's achievement in improving health service delivery has been remarkable. Not only in health care, by all measurement, country's improvementis exemplary. Poverty declined almost by half from the 1996 level of 45.4 % to 23.4 % in 2016;total per capita income of the country was 708.8 USD in 2016(2).

Progress in health sector is promising. Ethiopia achieved most of the millennium development goals: achievement in improving access to primary education ; reduction in child mortality; control of Pulmonary TB malaria and HIV/AIDS (3).Maternal mortality ratio of the country is 353/100,000 LBS; but, It should have been 267/100,000 LBS to achieve the MDG(4). The life expectancy of the nation has improved significantly from bass line of 48.8 for female and 45.6 for male in 1990 to 66.8 for female and 63.6 for male in 2015(5).

Ethipians are suffuring from triple burden of dieaseases—communicable, maternal , neonatal and nutrition disorders(CMNN disorders); non communicable disease and injuries(6).

The Ethiopian healh care tierd in to three levels— with increasing complexity of care from primary health care unit to tertiary one. The primary health care unit comprises primary hospital; a health center with other five satellite health posts. Each health post serves for 5000 people at the lowest level of health care unit; a health center serves15,000- 25,000 in rural, and 40,000 in Urban area. Primray hospital receives referals from health centers, and each primary hospital will serve 60,000-100,000 people. The next hierarchy is general hospital and finally territory one(7).

The three tier health care system de-concentrate power from federal to regional and woreda(district) governments. The devolution of power to regional governments has largely resulted in shifting decision-making for public service delivery from the central to regional and district levels.

It is at the level of primary health care—specifically at health centers—Ethiopian primary health care clinical guideline has been implemented.

At the center of primary health care unit, health extension program—Ethiopia's brand new program—plays a vital role to promote primary health care at the level of health posts. This program is well spearheaded throughout the country.Around 40,000 health extension workers discharge their responsibility at the level of health posts—the lowest level of the health system. Two salaried female health extension workers execute 18 packages. These packages are mainly pomotive and preventive health interventions— onmaternal and child health, hygiene and environmental health—infectious diseases control and health education(8).

2. Introduction

Since Almata declaration, in 1978, Ethiopia has given duefocus on primary health care and has worked a lot on it: health extension program is a sign of commitment the country has bestowed attention on primary health care. Despite remarkable success in improving access to primary health care; quality of care at all segments of the tier system, including at the primary health care level is suffered (7). Cares delivered are fragmented—as exemplified by stand-alone clinical guidelines— and vertical programs are common, with no integration at all levels of care. These fragmented approaches fail to recognize the needs of patients, and hence, it is not delivering person-centered care.

In recognition to this situation and the need to avail universal health care coverage—a commitment taken by sustainable development goals—the health sector transformation plan has envisioned to promote person centered care(caring and respectful and compassionate health care) as well as promoting quality and equity of care at all tier system(7). Ethiopian national health care quality strategy was formulated to improve quality of care given in all tiers of the health system. The strategy has set four strategic focus areas(9). Primary health care clinical guideline

comes at this juncture to respond to the gaps visible at primary health care unit, at the level of health centers.

Ethiopian primary health care clinical guidelines directly related to the two health sector transformation agendas—improve quality and equity; and providing caring, respectful and compassionate care. It will help to give comprehensive and integrated care; enable to give whole person care; enable to give all service at service delivery point ("one stop shop"); and provide services that are safe and respectful to the user. One of the recommendations of quality strategy is to avail and enforce standards and protocols; EPHCG is a standard document and protocol which all health centers are obliged to follow and standardize medical care given at the health facility level (9). It has multiple modules in it focusing on a spectrum of areas: infectious, child and maternal, chronic non communicable diseases. If applied well, it will help to identify all possible problems of a person, and hence minimize missed opportunity.

The EPHCG was localized from PACK (practical approach to care kit) guide—developers of this guide based at Knowledge Translation Unit (KTU), University of Cape Town, Lung Institute. This guide has more than 2300 recommendations, aligned with WHO guidance and global evidence, updated annually through Best Practice, a British Medical Journal evidence synthesis product. Ethiopian primary health care clinical guideline (EPHCG) is the Ethiopian version of PACK. EPHCG expanded to include common children (age 5-14 years) problems. The localization of EPHCG from PACK was done by Ethiopian experts with close support and guidance of experts from KTU. Localization of EPHCG was done after reviewing 30 local guidelines, and the evidences in those guidelines were looked into with evidences on Global PACK. Therefore the EPHCG is prepared to give comprehensive and one stop shop services; in addition, it has communication module integrated in it to provide care which is respectful and compassionate. EPHCG has adult symptom pages; adult chronic conditions pages, child content pages; and women's health page(10).

In addition, EPHCG adopted a cascade model of training approach, with three levels of trainers. At national level, master trainings will be given (for those who are from the ministry, regions and zones). Next, Facility trainers will be trained by national master trainers. Facility trainers will conduct onsite educational training for health

workers who are going to use the guideline at the health facility level. Eight weeks training session — each session will long 1-1.5 hours per week —will be held for all health workers at health center level. A total of 12 cases, and another 2 optional cases, will be reviewed on the 8 weeks sessions.

Ethiopia localized EPHCG successfully. Implementation of EPHCG has been set offon 400 health centers throughout the country in the last 12 months. In the following section we will review what successes, challenges, and key lessons learnt from the implementation of EPHCG on those 400 health centers.

Health center reform case team, from Health extension program and primary health care directorate, has followed the implementation of EPHCG. The case team produced supervision reports; members of the case team also attended regional review meetings, and frequently communicated with regional health bureau regarding EPHCG implementation. This brief document was made based on these activities.

3. Implementation of EPHCG on 400 health centers

For the sake of simplicity, implementation is divided in to three phases: preparation phase, training phase and guideline implementation phase.

3.1. The preparation phase

Readiness assessment checklist was sent to regions so that regions could communicate with health centers, filled the checklist, and sent back. The expectation was to identify gaps to implement EPHCG. But, most of the health centers did not send back the filled report; even those filled checklists were not analysed to see the gaps.

Based on few selected criteria, 400 health centers were slected. These criteria were: health center reform score >80%; a health center having better infrastructure and medical equipment; and health center should be in transformation woredas. Printing of EPHCG and other supporting training materials were done, and budget were transferred to 11 regionsto train the facility trainers. Totally 6300 EPHCG guidelines and other supportive documents were printed and ready to set off the trainings. Rural health centers took 7 guidelines (including 2 guidelines for facility trainers); and

urban based health centers took 10 guidelines, in addition to the 2 guideline for facility trainers.

3.2. Training phase

Lead master training of trainers for 6 senior health professionals were given by South Africa KTU members. Then TOT was given for 97 health professionals who came from all regional health bureaus and partners. Training for facility trainers were given for **848**health workers from selected 424 health centers. A total of 424 health centers were engaged in the training, at least two facility trainers per health centers. Onsite educational training has been given at all health facility level, led by facility trainers.

3.3. Implementation phase

In principle, usage of the guideline (implementing the EPHCG)) to treat patients should start after health workers see the first case during the onsite educational training. But, we define implementation if a health center cascaded the on-site educational training and seeing at least 6 cases. Based on these criteria, currently, among the 424 health centers, a total of 306 health centers started EPHCG implementation throughout the country.

4. Major challenges encountered during the three phases of implementation.

Phases of implementation	Specific challenges	Specific solutions and recommendations
Preparation phase	Failure to get the filled readiness assessment on time	Frequent communicationwith regions to get the report
	Health centers did not respond based the readiness assessment.	Regions were encouraged to help health centers to respond based on the findings of readiness assessment
	Training material shortage at the beginning of the training	Different partners were asked to support the printing and the move was successful; Even with this solution, facility trainers training started after three months of the new budget

		year.
Training phase	Onsite educational training principles were new to regional, woreda and health center management and they tended to finish the training in 4 straight days rather than doing it on 8 weeks.	Advocacy was done on the principle of onsite education and its benefits while our team made supportive supervision and on regional review meetings.
	Engagement , ofzonal, woreda and health center management, on health worker's' onsite-educational training was low	Continuously we communicated with regional health bureaus about the progress they have made and the importance of onsite educational trainings. In addition, the joint steering committees (JSC) made EPHCG as a main agenda, and help us to engage regional, zonal, and woreda management.
	Some facility trainers did not comply with the requirement of onsite education training.	This was rectified during the supportive supervision time and on regional health bureaus review meetings.
	Health workers showed low motivation to attend the onsite educational training sessions.	This was communicated with regional health bureaus to work on this issue and persuade health workers on the benefit of EPHCG onsite educational training. In addition, we have a plan to consider the onsite educational training sessions as a continuing professional development activity, and to get credit point by attending these sessions.
	Large time gape between facility trainers training and starting of onsite educational training.	This was communicated with regional health bureaus to start the training immediately after facility trainers training.
	Mostly onsite education trainings did take more than the required time (More than 8 weeks).	Reassurance was made for it is a new program and it may take more than 8 weeks, we accepted as a normal deviation if they finished the training from 6 weeks to 12 weeks.
	Mostly, progress reports about the onsite educational trainings were late or absent.	We influenced to get the report and to take EPHCG seriously through JSC and frequent communication with regional health bureaus.
	In some large health centers, two facility trainers were not adequate to provide the onsite educational training	We recommended each facility trainer to conduct two groups of onsite educational sessions independently, rather than the two Facility trainers to have only one group.
	In adequate attention to the implementation of the guideline by	We influenced them to take EPHCG seriously through JSC and frequent communication with

	regional, zonal, woreda and health center management.	regional health bureaus.
	Most of the health workers considered the EPHCG as a reference material, rather than using it as a tool, and used the guideline sparingly.	Frequently communicated about this issues with regional health bureaus, during site supportive supervision and regional review meetings.
Implementation phase	Health workers perceived using the guideline as a tool could take much time to manage a patient; and this made them unable to see the allocated patients per a health worker if they are to use the guideline consistently. This complaint was very severe in busy health centers.	We recommended using the guideline consistently, and through a time, they get used to it and shorten the time. In addition, we have a plan to test how much time does a health worker needs to examine and manage a patient using a PHCG.In addition, working on health workers attitude was recommended because health workers have not used, and tested the guideline; but they are talking their perceptions.
	Attitude of health workers and health center management is mostly negative towards the use of EPHCG, especially in large city health centers.	Promoting the guideline to health workers and facility managers should be continually performed to have a favourable attitude towards the guide. In addition, we suggested to include EPHCG as one criteria in woreda transformation; and one major activities to be included in health workers yearly performance plans.
	Most of health centers did not have laboratory tests and drugs as per the EPHCG requirement.	This will be the recurring problems if EPHCG is implemented fully. We recommended revising facility specific drug lists, laboratory reagents and medical equipment as per the EPHCG standard.
	Some recommendations on the guideline are out dated(example HIV, STI)	Continual updating of EPHCG is recommended, creating a system to do so should be given due emphasis.
	There was some resistance from pharmacy professionals to dispense drugs based on EPHCG.	Engaging pharmacy professionals was recommended. Involving pharmacy professional on onsite educational sessions should be considered for the future expansion of EPHCG.
	There was shortage of the guidelines in health centers.	Second round of guideline distribution was made. In addition mobile app is being prepared for future use. This will partly rectify the

		problems. It is also better to think of desk top application in the near future.
	There was a reservation and fear that referring patients as per EPHCG to the next higher level may increase the number of referrals. Hospitals did return patients to health centers because they did not know the EPHCG and criteria stipulated in the guideline.	Engaging hospitals is mandatory and orientation should be given. Hospitals could play a role in mentoring the implementation of the guideline.Further discussion should be made with regional health bureaus about the target regarding referrals. Target should be" to decrease unnecessary referrals"; not necessary those who need real referals.
	Some health centers (especially in major cities like Addis Ababa and Harar) did have a better human resource and medical equipment and they declined to refer some patients based on EPHCG criteria; because they are equipped just like primary hospitals.	This issue is on pipeline. It needs further discussion regarding referrals made by these larger and urban based health centers.
	Lack of alignment and synergy among directorates(with diseases prevention and control directorate, maternal and child health directorate, quality health service directorate, clinical service directorate)was a missed opportunity to	Alignment should be made with these referrals and EPHCG should be an entry point and consensus making platform for all programs.
	Health workers perceived that using the guideline in front of patients is embarrassing and patients' trust on them could dwindle.	Advocacy and promotion of EPHCG to communities using different outlets was recommended. This criterion is considered in implementation standards of EPHCG. Therefore, advocacy and promotion of the guideline is required from health centers as part of full implementation of the guideline.
	Partly, regional health bureaus, zonal and woreda health department; as well as partners could not support the implementation because there was no implementation manual, and hence, these parties could not support health centers adequately.	Implementation manual that contains implementation standards; checklists; and monitoring, evaluation and mentoring frameworks were prepared. It will be dispatched soon to regions and partners to immediate use.

5. What were key success factors to implement the guideline?

- **Engagement of the top leadership was successful.** The Joint Steering Committee—this is the highest decision making bodies in health sector comprises of regional health bureau and agency heads; directors from Federal ministry of health; and led by Minster and State Minsters of health. The JSC has continually discussed about EPHCG and this has given leverage to implement the guideline on 400 health centers. But engagement dwindles when we go down along the hierarchy: zonal, woreda and health center.
- **Fairly enough budgets were allocated:** Ministry of health allocated enough budgets to cascade the trainings, conduct mentoring and supportive supervision as well as for regional health bureau review meetings.
- **EPHCG is well integrated with the existing health system:** EPHCG implementation was fairly integrated with the existing structure: from ministry of health till woreda health offices.
- **Stakeholder engagement was fairly good:** continuous support from South Africa Knowledge Translation Unit (KTU) from University of Cape Town was one of the success factors. Till now, ministry of health continues its communication and they are helping to share their experience in implementation. In addition, many stakeholders are supporting the implementation in printing the guideline and giving facility trainers training. These partners are also willing to help the real implementation and they requested us to give general directions on its implementation. Accordingly, ministry of health has finalized implementation manual on the guideline.

6. General recommendations

- Readiness assessment should be seriously taken, especially for new starters and act accordingly to fulfil the required resources before starting EPHCG implementation**.**
- Continually engaging the whole leadership—from federal to health center level—is critical to effect successful implementation of EPHCG.

- Align all directorate activities on health centers: EPHCG should be an entry point and consensus creating platform to all activities upholdby directorates.
- Immediately finalize EPHCG implementation manual and orient all implementers and stakeholders.
- Continuous advocacy and promotion of the guideline to health workers and the community to accelerate scaling up of the implementation.
- Further leveraging stakeholders engagement is critical: as the job ahead of us is very wide, many stakeholders should come in to and support the implementation.
- Creating a system to continually updating the guideline will help to build trust from health workers and provide state of the art health services.
- Institute learning collaborative between health centers, hospitals and district health officers to uphold implementation based on the standard set in the implementation manual.
- Nationally work on to institute center of excellence sites throughout the country which enable other health centers to emulate them.
- Avail monitoring and evaluation framework (along with indicators) urgently.
- Prepare roadmap to scale up the implementation in all health centers: as it is resource intensive, implementing the EPHCG in all health centers in short period of time may need preparation, organization and harmony. Therefore, it needs a plan (roadmap) to scale up the implementation in all health centers .

7. Concluding remarks

We have learned a lot in the last 12 months on implementation of EPHCG. As we move to include larger number of health centes in the coming years, lessons learned will help a lot to shape and improve implementation of Ethiopian primary health care implementation. Continuously working on top leadership and creating favourable attitude towards EPHCG must be given utmost importance to see the guideline successfully implemented. In addition, creating a system which helps to continuously updating the guideline must be duly emphasised.

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